What is claimed is:

- A device that embeds an electronic watermark into an original
- 2 image, comprising:
- 3 a circuit that performs discrete cosine transform (DCT)
- 4 for the original image to output DCT coefficients;
- 5 a circuit that embeds the watermark into the DCT
- 6 coefficients, the watermark containing in a part thereof an
- 7 instruction to an electronic watermark detection device;
- 8 a circuit that quantizes the DCT coefficients into which
- 9 the watermark is embedded; and
- 10 a circuit that variable-length encodes the quantized DCT
- 11 coefficients.
 - 1 2. The device according to claim 1 wherein the electronic
 - watermark is eight-bit data and the instruction is four-bit data.
- 1 3. The device according to claim 1 or 2 wherein the instruction
- 2 displays characters.
- 1 4. The device according to claim 1 or 2 wherein the instruction
- 2 accesses a web site on the Internet.
- 1 5. The device according to claim 1 or 2 wherein the instruction
- 2 starts an application program.
- 1 6. A device that detects an electronic watermark embedded in
- 2 an original image, comprising:
- 3 a circuit that decodes compressed image data in which the

- 4 watermark is embedded;
- 5 a circuit that performs inverse discrete cosine transform
- 6 (IDCT) for the decoded data;
- 7 a circuit that detects electronic watermark data embedded
- 8 in the data for which IDCT has been performed; and
- 9 a circuit that performs a predetermined processing
- 10 according to an instruction included in a part of the electronic
- 11 watermark.
 - 1 7. The device according to claim 6 wherein the electronic
- 2 watermark is eight-bit data and the instruction is four-bit data.
- 1 8. The device according to claim 6 or 7 wherein characters are
- 2 displayed according to the instruction.
- 1 9. The device according to claim 6 or 7 wherein a web site on
- 2 the Internet is accessed according to the instruction.
- 1 10. The device according to claim 6 or 7 wherein an application
- 2 program is started according to the instruction.
- 1 11. A method for embedding an electronic watermark into an
- 2 original image, comprising the steps of:
- 3 performing discrete cosine transform (DCT) for the
- 4 original image to output DCT coefficients;
- 5 embedding the watermark into the DCT coefficients, the
- 6 watermark containing in a part thereof an instruction to an
- 7 electronic watermark detection device;

- 8 quantizing the DCT coefficients into which the watermark
- 9 is embedded; and
- 10 variable-length encoding the quantized DCT coefficients.
- 1 12. The method for inserting a watermark according to claim
- 2 11 wherein the electronic watermark is eight-bit data and the
- 3 instruction is four-bit data.
- 1 13. The method according to claim 11 or 12 wherein the
- 2 instruction displays characters.
 - 14. The method according to claim 11 or 12 wherein the
- 2 instruction accesses a web site on the Internet.
- 1 15. The method according to claim 11 or 12 wherein the
- 2 instruction starts an application program.
- 1 16. A method for detecting an electronic watermark embedded
- 2 in an original image, comprising the steps of:
- 3 decoding compressed image data in which the watermark is
- 4 embedded;
- 5 performing inverse discrete cosine transform (IDCT) for
- 6 the decoded data;
- 7 detecting electronic watermark data embedded in the data
- 8 for which IDCT has been performed; and
- 9 performing a predetermined processing according to an
- 10 instruction included in a part of the electronic watermark.

- 1 17. The method according to claim 16 wherein the electronic
- 2 watermark is eight-bit data and the instruction is four-bit data.
- 1 18. The method according to claim 16 or 17 wherein characters
- 2 are displayed according to the instruction.
- 1 19. The method according to claim 16 or 17 wherein a web site
- 2 on the Internet is accessed according to the instruction.
- 1 $\,$ 20. The method according to claim 16 or 17 wherein an application
- 2 program is started according to the instruction.
- 1 21. A computer readable recording medium storing therein a
 - program for embedding an electronic watermark into an original
- 3 image, said program causing a computer to:
- 4 perform discrete cosine transform (DCT) for the original
- 5 image to output DCT coefficients;
- 6 embed the watermark into the DCT coefficients, the
- 7 watermark containing in a part thereof an instruction to an
- 8 electronic watermark detection device;
- 9 quantize the DCT coefficients into which the watermark
- 10 is embedded; and
- variable-length encode the quantized DCT coefficients.
- 1 22. A computer-readable recording medium storing therein a
- 2 program for detecting an electronic watermark embedded in an
- 3 original image, said program causing a computer to:

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4	decode compressed image data in which the watermark is
5	embedded;
6	perform inverse discrete cosine transform (IDCT) for the
7	decoded data;
8	detect electronic watermark data embedded in the data for
9	which IDCT has been performed; and
10	perform a predetermined processing according to an

instruction included in a part of the electronic watermark.